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MORRIS O'BRYANT COMPAGNI, P.C.  
136 SOUTH MAIN STREET  
SUITE 700  
SALT LAKE CITY, UT 84101

EXAMINER
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TRIEU, THAI BA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/795,805	SQUIRES, RICHARD K.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thai-Ba Trieu	3748	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 38-42,44-53,55-57,59-66,68-103 and 105-115 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 53,55-57,59-64 and 87-89 is/are allowed.
- 6) ☒ Claim(s) 38-42,44-52,65,66,68-86,90-103 and 105-115 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office Action is in response to the Amendment filed on February 2006. Applicant's cooperation in correcting the informalities in the specification is appreciated. Applicant's cooperation in amending the claims to overcome the claim objections relating to informalities as well as indefinite claim language is also appreciated.

Claims 38, 51, 53, 59, 65-66, 70, 75-76, 80, 82-83, 87, 90, 95, 100-101, and 109 were amended; claims 1-37, 43, 54, 58, 67, 104, and 116-123 were cancelled.

### ***Specification***

The amendment filed on May 19, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

- The "***throttle body***" (See Claim 110 line 2).

### ***Claim Objections***

Claim 84 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, the recitation

of ***“an oil pump in fluid communication with said turbocharger”*** has been recited in claim 82, lines 4-5.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 46, 51, 70, 76, 84; claim 90 and its dependent claims 91-99; claim 100 and its dependent claims 101-108; and claim 109 and its dependent claims 110-115 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically,

1. In claim 46, lines 2-3, the recitations of ***“said air filter being coupled to the turbocharger at a location away from the engine compartment of the vehicle, the location being relatively isolated from road debris”*** renders the claim indefinite, since it is not clear that which location relatively isolated from road debris and far away from the engine compartment applicant wants to be referenced to? Applicant is required to identify the location in the vehicle where the filter is positioned.

2. In claim 51, the recitation of ***“said oil pump being mounted away from proximate said turbocharger”*** renders the claim indefinite, since it is not clear that how proximate the distance between the oil pump and the turbocharger is to be defined such as 1 inch, 1 cm, 1mm etc... Applicant is required to define this distance.

3. In claims 70, lines 2-3; and claim 95, line 2, the recitation of ***“mounting the oil pump proximate said turbocharger”*** renders the claim indefinite, since it is not clear that how proximate to the muffler such as 1 inch, 2 inches, 10 cm, or 10 mm, the hardware for mounting the oil pump is mounted. Applicant is required to definite the proximate distance to the underside where the mounting hardware can be mounted.

4. In claim 76, lines 2-3, the recitation of ***“positioned outside the engine compartment and proximate to said turbocharger”*** render the claim indefinite, since it is not clear that which location outside the compartment and how proximate to the turbocharger such as 1 inch, 2 inches, 10 cm, or 10 mm, the oil pump or the oiling system is positioned. Applicant is required to definite the location outside the compartment and the proximate distance to the turbocharger the oil pump or the oiling system to be positioned.

Additionally, applicant is required to revise claim 76, since it is not clear that the oiling system or the oil pump being position outside the engine compartment and proximate to the turbocharger.

5. In claim 90, lines 8-9; and claim 100, lines 10-11; claim 109, lines 8-9, the recitation of ***“for mounting/remotely mounting the turbocharger to the underside of the vehicle and not to the engine at a location away from an engine compartment of a vehicle”*** renders the claim indefinite, since it is not clear that which location/part of the vehicle underside and how far away the turbocharger is remotely mounted from the

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engine compartment, in which location in the vehicle the turbocharger is remotely mounted such as at the front wheel, the rear wheel, in the passenger compartment, the roof of the vehicle, or at any location on the under-floor/or under-body of the vehicle, or the turbocharger having a mounting hardware and being mounted on a shelf or a table which is away from an engine compartment of a vehicle. Applicant is required to identify the location of the vehicle underside and the location far away from the compartment where the turbocharger can be mounted.

6. Claim 84 recites the limitation **"said oiling system"** in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

7. In claim 84, line 2, **"an oil pump"** is double citation.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 38-40, 42, 45, 65-66, and 69 are rejected under 35 U.S.C. 102(b) as being anticipated by Minami et al. (Patent Number 4,422,295).***

**Regarding claim 38,** Minami discloses a turbocharger system for a vehicle having an internal combustion engine, an exhaust pipe coupled to the internal

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combustion engine, and a space defined by the vehicle normally occupied by a muffler, comprising:

a turbocharger (12);

an oiling system (37, 38, 45) coupled to the turbocharger for supplying oil to the bearings (31) of the turbocharger (See Figure 1, Column 2, lines 58-68, and Column 3, lines 1-26); and

mounting hardware (Not Numbered) mounting the turbocharger to the exhaust pipe (25) of the vehicle at least partially in the space normally occupied by the muffler (See Figures 1-2).

With regard to the preamble directed ***“for a vehicle having an internal combustion engine... normally occupied by a muffler”***, that pre-ambular recitations apply to claim 75 have not been given any patentable weight. See MPEP 2111.02 **PREAMBLE STATEMENTS RECITING PURPOSE OR INTENDED USE**. See also *In re Schreiber*, 128 F. 3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. cir. 1997).

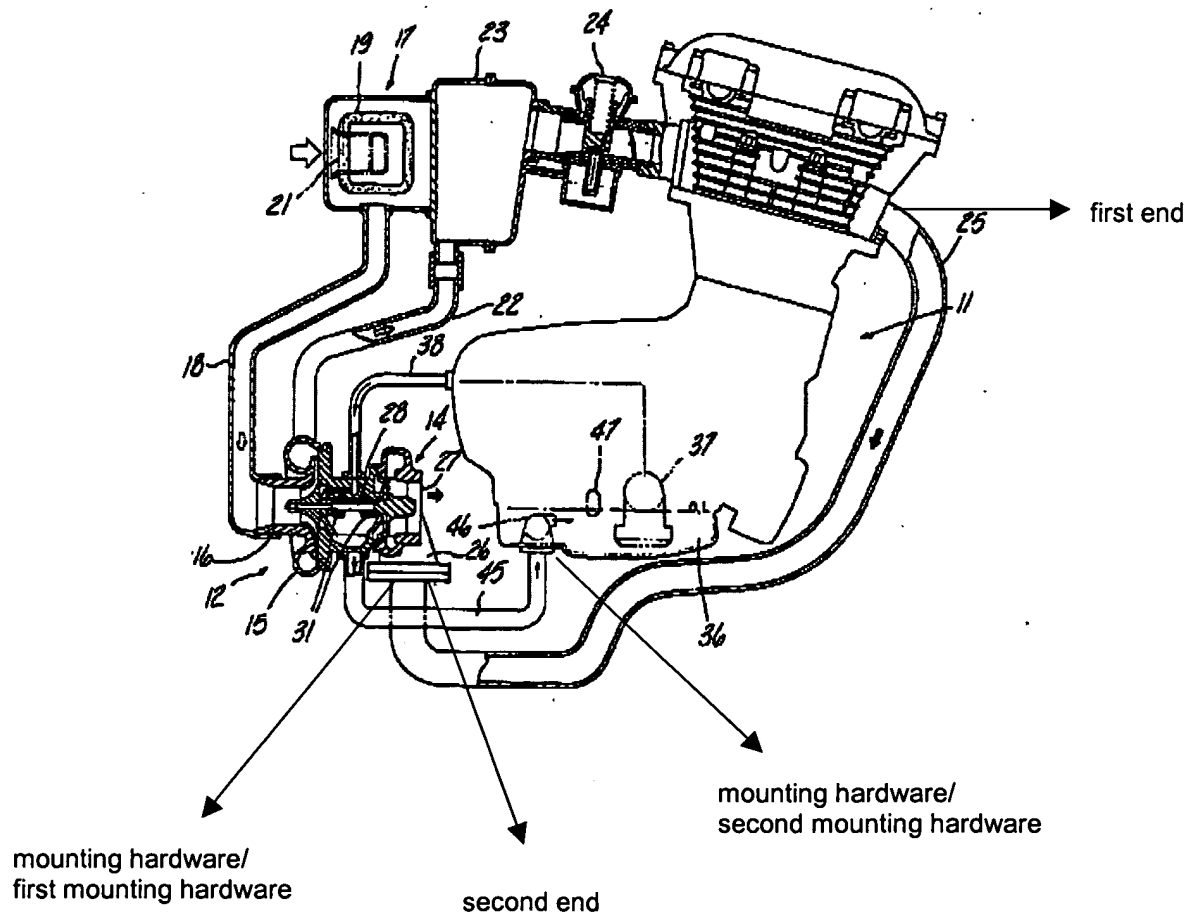
Note that the recitation of “at least partially in the space normally occupied by the muffler” is readable on any space downstream of the exhaust manifold of the vehicle.

**Regarding claims 39-40, 42, and 45**, Minami further discloses said turbocharger including an oil inlet (via 38, 39) configured for being coupled to a pressure side of said

oiling system, an oil outlet (45), an exhaust inlet (25), an exhaust outlet (27), an air charge inlet (18), and an air charge outlet (22) (See Figures 1-2);

wherein said oiling system comprises an oil pump (37) in fluid communication with said turbocharger (12);

wherein said oiling system includes the oiling system of the vehicle (See Figures 1-2, Column 3, lines 27-66, and Column 4, lines 1-4); and  
an air filter (17) coupled to the air charge inlet of the turbocharger (See Figure 1).





**Regarding claims 65-66 and 69**, Minami discloses a turbocharger installation kit for a vehicle having a combustion engine disposed within an engine compartment, and oiling system having an oil system pump (37), and oil reservoir (in the engine crankcase 36) for lubricating the combustion engine, comprising:

a turbocharger (12) (See Figure 1);

an oil pump (46) for coupling between the turbocharger and the oiling system of the vehicle to pump oil back to the oiling system of the vehicle (See Figure 1);

first exhaust plumbing (via 25, 26) having a first end (Not Numbered) for mounting to an exhaust system of the engine and a second end, the first exhaust plumbing configured for extending from the engine compartment to an underside of the vehicle (See Figure 1);

first mounting hardware (Not Numbered) configured for mounting the turbocharger to the second end of the first exhaust plumbing and not to the combustion engine (See Figure 1)

first oil line configured for coupling between on oiling system of the vehicle and the turbocharger(See Figure 1);

a second oil line (via 38, 45) for coupling between the oil pump and the oiling system of the vehicle (See Figure 1);

a first duct (22, 23) for delivering air from the turbocharger to the engine (See Figure 1); and

second exhaust plumbing for coupling to the turbocharger and exiting exhaust from the turbocharger (via 27) (See Figure 1).

Note that the recitations of ***“for mounting to an exhaust system”***, and ***“for extending from the compartment to underside of the vehicle”*** are considered as the functional language. The Minami mounting hardware is capable of performing the same desired function as the instant invention having been claimed in claim 65. Additionally, a turbocharger having a mounting hardware, as taught by Minami, can be mounted every where in a vehicle or underside of the vehicle.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

***Claims 41, 44, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami (Patent Number 4,422,295), in view of Widenhorn (Patent Number 5,499,693).***

Minami discloses the invention as recited above; however, Minami fails to disclose a valve and an outlet of the valve positioned before said oil inlet of said turbocharger.

Widenhorn teaches that it is conventional in the art of lubricating bearings of a turbocharger to utilize a valve (11) in fluid communication with the oil inlet (10 to 11 to 20, and then to 21) of the turbocharger to prevent oil from flowing into the turbocharger when the pressure on the pressure side of the oiling system drops below a

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predetermined level; and an outlet of said valve is positioned before said oil inlet of said turbocharger (See Figures 1-2; Column 1, lines 14-25; Column 2, lines 9-18; Column 3, lines 50-67, and Column 3, lines 1-25).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a valve and the valve with an outlet positioned before said oil inlet of said turbocharger, as taught by Widenhorn, to improve the efficiency of the Minami turbocharger.

***Claims 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295); and further in view of Design Choice.***

Minami discloses the invention as recited above, and further discloses a duct for coupling said filter air to said turbocharger (via 18) (See Figure 1); however, fails to disclose the location of the air filter.

One having an ordinary skill in the turbocharger art, would have found ***“the location of the filter being mounted away from the engine compartment of the vehicle and relatively isolated from the road debris, and in a fender well of the vehicle”*** in the instant application as a matter of design choice. Moreover, there is nothing in the record, which establishes that ***the claimed position of the filter being mounted away from the engine compartment and relatively isolated from road debris and in a fender of the vehicle***, presents a novel of unexpected result (See *In re Kuhle*, 526 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

***Claims 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Pleuss et al. (Patent Number 6,688,103 B2).***

Minami discloses the invention as recited above, however, fails to disclose a waste gate.

Pleuss teaches that it is conventional in the exhaust gas turbocharged internal combustion engine art, to utilize a wastegate (36) coupled between an exhaust system of the vehicle at a location before the exhaust inlet of the turbocharger and a wastegate control system for regulating boost pressure (See Figure 1, Column 3, lines 19-21).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a wastegate, as taught by Pleuss, to improve the efficiency of the Minami device, since the use thereof would have controlled/regulated the charge pressure.

***Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Evenko (Patent Number RU 20282889 C).***

Minami discloses the invention as recited in the rejection of claim 38; however, Minami fails to disclose a water injection system.

Evenko teaches that it is conventional in the art of cooling a supercharged internal combustion engine, to utilize a water injection system (10, 13, 12, 7, 6) coupled

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to a charge air tube (4) for injecting water into a flow of gases exiting the turbocharger to cool the flow gas (See Figure and Abstract).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a water injection system, as taught by Evenko, to improve the efficiency of the Minami device.

***Claims 51 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Design choice.***

Minami discloses the invention as recited above, and further discloses a second mounting hardware (Not Numbered) for mounting the oil pump (46); however, fails to disclose said oil pump being mounted proximate said turbocharger.

One having an ordinary skill in the turbocharged internal combustion engine art, would have found the location where said oil pump being mounted proximate said turbocharger, as a matter of design choice depending on the size of the vehicle. Moreover, there is nothing in the record, which establishes that the claimed location of the oil pump, presents a novel or unexpected result (See *In re Kuhle*, 526 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

Note that Minami inherently has to have a mounting hardware for mounting the pump (46) to the engine crankcase (36) (Clearly shown in Figure 1).

***Claims 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Werner (Patent Number 5,323,612).***

Minami discloses the invention as recited above; however, Minami fails to disclose a pump controller.

Werner teaches that it is conventional in the turbocharger art, to utilize a pump controller (20) for varying the speed of the pump (21) according to engine speed (See Figures 1 and 4, Column 3, lines 66-68, and Column 4, lines 1-5).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a pump controller, as taught by Werner, to improve efficiency, in the Minami device.

***Alternatively, Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Coester et al. (Pub. Number EP 952329 A), and further in view of design choice.***

Minami discloses the invention as recited above; however, fails to disclose mounting hardware for mounting said oil pump proximate said turbocharger.

Coester teaches that it is conventional in the turbocharged internal combustion engine art, to utilize mounting hardware for mounting oil pump (9) in the lower region of the engine (See Figure 1, and Abstract).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized mounting hardware, as taught by Coester, to mount the oil pump to the engine.

Additionally, one having an ordinary skill in the turbocharged internal combustion engine art, would have found the location where said oil pump being mounted proximate said turbocharger, as a matter of design choice depending on the size of the vehicle. Moreover, there is nothing in the record which establishes that the claimed location of the oil pump, presents a novel or unexpected result (See *In re Kuhle*, 526 F. 2d 553, 188 USPQ 7 (CCPA 1975)).

***Claim 71 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295,) in view of Sundles et al. (Patent Number 4,628,877).***

Minami discloses the invention as recited above; however, Minami fails to disclose electric harness, switch and relay.

Sundles teaches that it is conventional in the internal combustion engine art, to utilize electric harness, switch (45), and relay (39, 41) for providing variable voltage to the oil pump to adequately meet the variable flow requirements of the turbocharger while reducing noise output of the oil pump when flow requirements are minimal (See Figures 1-2, Column 3, lines 43-68, and Column 4, lines 1-68, and Column 5, lines 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized electric harness, switch and relay, as taught by

Sundles, to improve the efficiency of the Minami device, since the use thereof would have minimized the friction wear of the turbocharged internal combustion engine during cold starts and provided lubrication to the turbocharger after engine has been shut off.

***Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Fehr et al. (Patent Number 4,953,515).***

Minami discloses the invention as recited above; however, Minami fails to disclose a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line.

Fehr teaches that it is conventional in the fuel injection system art, to utilize a hose (4) and fittings (Not Numbered) to connect a fuel pressure regulator (3) to an intake tube (11), an intake manifold, or to an exhaust line (See Figures 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line, as taught by Fehr to improve the efficiency of the Minami device, since the use thereof would have controlled the quantity/amount of fuel injecting into the engine.

***Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Pleuss et al. (Patent Number 6,688,103 B2).***



Minami discloses the invention as recited above, and further Minami discloses said a waste gate.

Pleuss teaches that it is conventional in the exhaust gas turbocharged internal combustion engine art, to utilize a wastegate (36) coupled between an exhaust system of the vehicle at a location before the exhaust inlet of the turbocharger and a wastegate control system for regulating boost pressure (See Figure 1, Column 3, lines 19-21).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a wastegate, as taught by Pleuss, to improve the efficiency of the Minami device, since the use thereof would have controlled/regulated the charge pressure.

***Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Werner (Patent Number 5,323,612).***

Minami discloses the invention as recited above; however, fails to disclose a pump controller.

Werner teaches that it is conventional in the turbocharger art, to utilize a pump controller (20) for varying the speed of the pump (21) according to engine speed (See Figures 1 and 4, Column 3, lines 66-68, and Column 4, lines 1-5).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a pump controller, as taught by Werner, to improve efficiency, in the modified Minami device.

***Claims 75-76, and 78-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295).***

Minami discloses a turbocharger system for a vehicle defining an engine compartment and having an internal combustion engine disposed within the engine compartment and an exhaust pipe coupled to the combustion engine and extending from proximate the engine to outside the engine compartment, comprising:

a turbocharger (12), said turbocharger including an oil inlet configured from being coupled to a pressure side of said oiling system, an oil outlet (45); an exhaust outlet (27), an air charge inlet (18), and an air charge outlet (22) (See Figures 1-2);

an oiling system (36, 37, 46) coupled to the turbocharger for supplying oil to the bearings (31) of the turbocharger (12) (See Figure 1); and

mounting hardware (Not Numbered) for mounting the turbocharger to the exhaust pipe (25) (See Figure 1).

an air filter (17) coupled to the air charge inlet of the turbocharger (12);

a duct coupling said air filter to said turbocharger (via 18) (See Figure 1); and

wherein said oiling system comprises an oil pump (46, 37) in fluid communication with (See Figure 1).

However, Minami fails to disclose the position where the turbocharger is mounted at a location outside the engine compartment and not to the engine; and the oil pump position outside the engine compartment and proximate to said turbocharger.

It is the examiner's position that the positioning of the turbocharger in the above claimed positions would have been obvious to one having ordinary skill in the art. More specifically, one having ordinary skill in the art would have positioned/mounted the turbocharger to the exhaust pipe, at any location outside the engine compartment and not to the internal combustion engine. The use of any location outside the engine compartment and not to the internal combustion engine where the turbocharger is mounted would have improve the liability and longevity of the turbocharger.

With regard to the preamble directed ***"for a vehicle defining an engine compartment ... extending from proximate the engine to outside the engine compartment"***, that pre-ambular recitations apply to claim 75 have not been given any patentable weight. See MPEP 2111.02 **PREAMBLE STATEMENTS RECITING PURPOSE OR INTENDED USE**. See also *In re Schreiber*, 128 F. 3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. cir. 1997).

***Claim 77 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Widenhorn (Patent Number 5,499,693).***

The modified Minami device discloses the invention as recited in the rejection of claim 75; however, fails to disclose a valve.

Widenhorn teaches that it is conventional in the art of lubricating bearings of a turbocharger to utilize a valve (11) in fluid communication with the oil inlet (10 to 11 to 20, and then to 21) of the turbocharger to prevent oil from flowing into the turbocharger

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when the pressure on the pressure side of the oiling system drops below a predetermined level (See Figures 1-2; Column 1, lines 14-25; Column 2, lines 9-18; Column 3, lines 50-67, and Column 3, lines 1-25).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a valve, as taught by Widenhorn, to improve the efficiency of the modified Minami turbocharger.

***Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Watanabe et al. (Pub. Number JP 01-080720 A).***

Minami device discloses the invention as recited above; however, fails to disclose said oil pump being mounted at a level that is below the turbocharger.

Watanabe teaches that it is conventional in the turbocharged internal combustion engine art, to utilize said oil pump (8) being mounted at a level that is below the turbocharger (See Figure).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized said oil pump being mounted at a level that is below the turbocharger, as taught by Watanabe, to provide an alternative location for oil pump.

***Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Widenhorn (Patent Number 5,499,693); further in view of Werner (Patent Number 5,323,612).***

The modified Minami device discloses the invention as recited above; however, fails to disclose a pump controller.

Werner teaches that it is conventional in the turbocharger art, to utilize a pump controller (20) for varying the speed of the pump (21) according to engine speed (See Figures 1 and 4, Column 3, lines 66-68, and Column 4, lines 1-5).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a pump controller, as taught by Werner, to improve efficiency, in the modified Minami device.

***Claims 82-84 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295); in view of Evenko (Patent Number RU 20282889 C).***

Minami discloses a turbocharger system for an internal combustion engine, comprising:

a turbocharger (12);

an oiling pump (37) coupled to the turbocharger (12) for supplying oil to the bearings (31) of the turbocharger (See Figures 1-2); and

mounting hardware (Not Numbered) for mounting the turbocharger an exhaust pipe of a vehicle and not to the internal combustion engine (See Figure 1); and

air filter (17) coupled to the air charge inlet of the turbocharger; a duct for coupling said air filter to said turbocharger (via 18) (See Figure 1);

wherein said oiling system includes the oiling system of the vehicle (See Figures 1-2, Column 3, lines 27-66, and Column 4, lines 1-4).

However, Minami fails to disclose a water injection system.

Evenko teaches that it is conventional in the art of cooling a supercharged internal combustion engine, to utilize a water injection system (10, 13, 12, 7, 6) coupled to a charge air tube (4) for injecting water into a flow of gases exiting the turbocharger to cool the flow gas (See Figure and Abstract).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a water injection system, as taught by Evenko, to improve the efficiency of the Minami device.

***Claim 85 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami (Patent Number 4,422,295); in view of Evenko (Patent Number RU 20282889 C), and further in view of Widenhorn (Patent Number 5,499,693).***

The modified Minami device discloses the invention as recited in the rejection above; however, fails to disclose a valve.

Widenhorn teaches that it is conventional in the art of lubricating bearings of a turbocharger to utilize a valve (11) in fluid communication with the oil inlet (10 to 11 to 20, and then to 21) of the turbocharger to prevent oil from flowing into the turbocharger when the pressure on the pressure side of the oiling system drops below a predetermined level (See Figures 1-2; Column 1, lines 14-25; Column 2, lines 9-18; Column 3, lines 50-67, and Column 3, lines 1-25).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a valve and the oiling system of the vehicle, as taught by Widenhorn, to improve the efficiency of the modified Minami turbocharger.

***Claims 90-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Widenhorn (Patent Number 5,499,693).***

Minami discloses a turbocharger installation kit for combustion engine, comprising:

a turbocharger (12) (See Figure 1);

an oil pump (37) for coupling to the turbocharger to assist in the flow of oil through the turbocharger (See Figure 1);

first exhaust plumbing (via 25, 26) configured for coupling said turbocharger to a flow of exhaust from an engine of a vehicle (See Figure 1);

first mounting hardware (Not Numbered) configured for mounting the turbocharger to the underside of the vehicle and not to the engine at the location away from an engine compartment of the vehicle (See Figure 1);

first oil line configured for coupling between an oiling system of the vehicle and the turbocharger (See Figure 1);

a second oil line (via 38, 45) for coupling between the oil pump and the oiling system of the vehicle (See Figure 1);

a first duct (22, 23) for delivering air from the turbocharger to a throttle body of the engine (See Figure 1); and

second exhaust plumbing for coupling to the turbocharger and exiting exhaust from the turbocharger (via 27) (See Figure 1).

However, Minami fails to disclose a valve.

Widenhorn teaches that it is conventional in the art of lubricating bearings of a turbocharger to utilize a valve (11) for coupling to the oil line (10 to 11 to 20, and then to 21) and for preventing oil flow into the turbocharger when the engine is not running (See Figures 1-2; Column 1, lines 14-25; Column 2, lines 9-18; Column 3, lines 50-67, and Column 3, lines 1-25).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized mounting hardware, as taught by Minami; and a valve, as taught by Widenhorn, to reduce the construction cost, to save the space requirement and to improve the efficiency of the Minami turbocharger system.



Note that the recitation of ***“for mounting the turbocharger to the underside of the vehicle and not to the engine at a location away from on engine compartment of a vehicle”*** is considered as the functional language. The Minami mounting hardware is capable of performing the same desired function as the instant invention having been claimed in claim 90. Additionally, a turbocharger having a mounting hardware which mounts the turbocharger to the exhaust pipe and not to the engine, as taught by Minami, can be mounted every where in a vehicle except the engine compartment, or can be mounted on a shelf or a table which is away from the engine compartment.

***Claim 95 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view Widenhorn (Patent Number 5,499,693); and further in view of Coester et al. (Pub. Number EP 952329 A).***

The modified Minami device discloses the invention as recited above; however, fails to disclose mounting hardware.

Coester teaches that it is conventional in the turbocharged internal combustion engine art, to utilize mounting hardware for mounting oil pump (9) in the lower region of the engine (See Figure 1, and Abstract).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized mounting hardware, as taught by Coester, to mount the oil pump to the engine.

***Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Widenhorn (Patent Number 5,499,693); and further in view of Sundles et al. (Patent Number 4,628,877).***

The modified Minami device discloses the invention as recited above; however, fails to disclose electric harness, switch and relay.

Sundles teaches that it is conventional in the internal combustion engine art, to utilize electric harness, switch (45), and relay (39, 41) for providing variable voltage to the oil pump to adequately meet the variable flow requirements of the turbocharger while reducing noise output of the oil pump when flow requirements are minimal (See Figures 1-2, Column 3, lines 43-68, and Column 4, lines 1-68, and Column 5, lines 1-2).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized electric harness, switch and relay, as taught by Sundles, to improve the efficiency of the modified Minami device, since the use thereof would have minimized the friction wear of the turbocharged internal combustion engine during cold starts and provided lubrication to the turbocharger after engine has been shut off.

***Claim 97 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view Widenhorn (Patent Number 5,499,693); and further in view of Fehr et al. (Patent Number 4,953,515).***

The modified Minami device discloses the invention as recited above; however, fails to disclose a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line.

Fehr teaches that it is conventional in the fuel injection system art, to utilize a hose (4) and fittings (Not Numbered) to connect a fuel pressure regulator (3) to an intake tube (11), an intake manifold, or to an exhaust line (See Figures 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line, as taught by Fehr to improve the efficiency of the modified Minami, since the use thereof would have controlled the quantity/amount of fuel injecting into the engine.

***Claim 98 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view Widenhorn (Patent Number 5,499,693); and further in view of Pleuss et al. (Patent Number 6,688,103 B2).***

The modified Minami discloses the invention as recited above, and further discloses said a waste gate.

Pleuss teaches that it is conventional in the exhaust gas turbocharged internal combustion engine art, to utilize a wastegate (36) coupled between an exhaust system of the vehicle at a location before the exhaust inlet of the turbocharger and a wastegate control system for regulating boost pressure (See Figure 1, Column 3, lines 19-21).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a wastegate, as taught by Pleuss, to improve the efficiency of the modified Minami device, since the use thereof would have controlled/regulated the charge pressure.

***Claim 99 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view Widenhorn (Patent Number 5,499,693); and further in view of Werner (Patent Number 5,323,612).***

The modified Minami device discloses the invention as recited above; however, fails to disclose a pump controller.

Werner teaches that it is conventional in the turbocharger art, to utilize a pump controller (20) for varying the speed of the pump (21) according to engine speed (See Figures 1 and 4, Column 3, lines 66-68, and Column 4, lines 1-5).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a pump controller, as taught by Werner, to improve efficiency, in the modified Minami device.

***Claims 100-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Coester et al. (Pub. Number EP 952329 A).***

Minami discloses a turbocharger installation kit for combustion engine, comprising:

a turbocharger (12) (See Figure 1);

an oil pump (37) for coupling to the turbocharger to assist in the flow of oil through the turbocharger (See Figure 1);

first exhaust plumbing (via 25, 26) configured for coupling said turbocharger to a flow of exhaust from an engine of a vehicle (See Figure 1);

second exhaust plumbing for coupling to the turbocharger and exiting exhaust from the turbocharger (via 27) (See Figure 1);

first oil line configured for coupling between an oiling system of the vehicle and the turbocharger (See Figure 1);

a second oil line (via 38, 45) for coupling between the oil pump and the oiling system of the vehicle (See Figure 1);

a first duct (22, 23) for delivering air from the turbocharger to a throttle body of the engine (See Figure 1);

first mounting hardware (Not Numbered) configured for mounting the turbocharger to the underside of the vehicle and away from the engine of the vehicle and engine compartment of the vehicle (See Figures 1-2).

Coester teaches that it is conventional in the turbocharged internal combustion engine art, to utilize mounting hardware for mounting oil pump (9) in the lower region of the engine (See Figure 1, and Abstract).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized mounting hardware, as taught by Minami; and mounting hardware, as taught by Coester, , to reduce the construction cost, to save the

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space requirement and to improve the efficiency of the modified Minami turbocharger system.

Note that the recitation of ***“for mounting the turbocharger to the underside of the vehicle and away from on engine compartment of a vehicle”*** is considered as the functional language. The Minami mounting hardware is capable of performing the same desired function as the instant invention having been claimed in claim 90. Additionally, a turbocharger having a mounting hardware, as taught by Minami, can be mounted every where in a vehicle except the engine compartment, or can be mounted on a shelf or a table which is away from the engine compartment.

***Claim 103 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view Coester et al. (Pub. Number EP 952329 A); and further in view of Widenhorn (Patent Number 5,499,693).***

The modified Minami device discloses the invention as recited in the rejection of claims ; however, fails to disclose a valve.

Widenhorn teaches that it is conventional in the art of lubricating bearings of a turbocharger to utilize a valve (11) for coupling to the oil line (10 to 11 to 20, and then to 21) and for preventing oil flow into the turbocharger when the engine is not running (See Figures 1-2; Column 1, lines 14-25; Column 2, lines 9-18; Column 3, lines 50-67, and Column 3, lines 1-25).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a valve, as taught by Widenhorn, to improve the efficiency of the modified Minami turbocharger.

***Claim 105 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Coester et al. (Pub. Number EP 952329 A); and further in view of Sundles et al. (Patent Number 4,628,877).***

The modified Minami device discloses the invention as recited above; however, fails to disclose electric harness, switch and relay.

Sundles teaches that it is conventional in the internal combustion engine art, to utilize electric harness, switch (45), and relay (39, 41) for providing variable voltage to the oil pump to adequately meet the variable flow requirements of the turbocharger while reducing noise output of the oil pump when flow requirements are minimal (See Figures 1-2, Column 3, lines 43-68, and Column 4, lines 1-68, and Column 5, lines 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized electric harness, switch and relay, as taught by Sundles, to improve the efficiency of the modified Minami device, since the use thereof would have minimized the friction wear of the turbocharged internal combustion engine during cold starts and provided lubrication to the turbocharger after engine has been shut off.

***Claim 106 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295, in view of Coester et al. (Pub. Number EP 952329 A); and further in view of Fehr et al. (Patent Number 4,953,515).***

The modified Minami device discloses the invention as recited above; however, fails to disclose a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line.

Fehr teaches that it is conventional in the fuel injection system art, to utilize a hose (4) and fittings (Not Numbered) to connect a fuel pressure regulator (3) to an intake tube (11), an intake manifold, or to an exhaust line (See Figures 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line, as taught by Fehr to improve the efficiency of the modified Minami, since the use thereof would have controlled the quantity/amount of fuel injecting into the engine.

***Claim 107 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Coester et al. (Pub. Number EP 952329 A); and further in view of Pleuss et al. (Patent Number 6,688,103 B2).***

The modified Minami discloses the invention as recited above, and further discloses said a waste gate.

Pleuss teaches that it is conventional in the exhaust gas turbocharged internal combustion engine art, to utilize a wastegate (36) coupled between an exhaust system



of the vehicle at a location before the exhaust inlet of the turbocharger and a wastegate control system for regulating boost pressure (See Figure 1, Column 3, lines 19-21).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a wastegate, as taught by Pleuss, to improve the efficiency of the modified Minami device, since the use thereof would have controlled/regulated the charge pressure.

***Claim 108 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Coester et al. (Pub. Number EP 952329 A); and further in view of Werner (Patent Number 5,323,612).***

The modified Minami device discloses the invention as recited above; however, fails to disclose a pump controller.

Werner teaches that it is conventional in the turbocharger art, to utilize a pump controller (20) for varying the speed of the pump (21) according to engine speed (See Figures 1 and 4, Column 3, lines 66-68, and Column 4, lines 1-5).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a pump controller, as taught by Werner, to improve efficiency, in the modified Minami device.

***Claims 109-111 and 113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Sundles et al. (Patent Number 4,628,877).***

Minami discloses a turbocharger installation kit for combustion engine, comprising:

a turbocharger (12) (See Figure 1);

an oil pump (37) for coupling to the turbocharger to assist in the flow of oil through the turbocharger (See Figure 1);

first exhaust plumbing (via 25, 26) configured for coupling said turbocharger to a flow of exhaust from an engine of a vehicle (See Figure 1);

mounting hardware (Not Numbered) configured for remotely mounting the turbocharger to an underside of the vehicle away from an engine and engine compartment of the vehicle (See Figures 1-2).

second exhaust plumbing for coupling to the turbocharger and exiting exhaust from the turbocharger (via 27) (See Figure 1);

first oil line configured for coupling between an oiling system of the vehicle and the turbocharger (See Figure 1);

a second oil line (via 38, 45) for coupling between the oil pump and the oiling system of the vehicle (See Figure 1);

a first duct (22, 23) for delivering air from the turbocharger to a throttle body of the engine (See Figure 1); and

second exhaust plumbing for coupling to the turbocharger and exiting exhaust from the turbocharger (via 27) (See Figure 1).

However, Minami fails to disclose an electric harness, switch, and relay.

Additionally, Sundles teaches that it is conventional in the internal combustion engine art, to utilize electric harness, switch (45), and relay (39, 41) for providing variable voltage to the oil pump to adequately meet the variable flow requirements of the turbocharger by reducing the speed of and thus the noise output of the oil pump when flow requirements are reduced (See Figures 1-2, Column 3, lines 43-68, and Column 4, lines 1-68, and Column 5, lines 1-2).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized mounting hardware, as taught by Minami; and electric harness, switch and relay, as taught by Sundles, to improve the efficiency of the modified Minami device, since the use thereof would have minimized the friction wear of the turbocharged internal combustion engine during cold starts and provided lubrication to the turbocharger after engine has been shut off.

Note that the recitations of ***“for remotely mounting the turbocharger to the underside of the vehicle away from an engine and engine compartment of a vehicle”*** and ***“being configured to mount in a space normally occupied by an existing muffler of the vehicle”*** are considered as the functional language. The Minami mounting hardware is capable of performing the same desired function as the instant invention having been claimed in claim 109 and 111. Additionally, a turbocharger having a mounting hardware, as taught by Minami, can be mounted everywhere in a vehicle except the engine compartment, or can be mounted on a shelf or a table which is away from the engine compartment.

Additionally, note that as the oil pump reduces its speed, it is inherently, the flow requirements should be reduced and the noise output should be also reduced.

***Claim 112 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view Sundles et al. (Patent Number 4,628,877); and further in view of Widenhorn (Patent Number 5,499,693).***

The modified Minami device discloses the invention as recited above; however, Minami fails to disclose a valve.

Widenhorn teaches that it is conventional in the art of lubricating bearings of a turbocharger to utilize a valve (11) for coupling to the oil line (10 to 11 to 20, and then to 21) and for preventing oil flow into the turbocharger when the engine is not running (See Figures 1-2; Column 1, lines 14-25; Column 2, lines 9-18; Column 3, lines 50-67, and Column 3, lines 1-25).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a valve, as taught by Widenhorn, to improve the efficiency of the Minami turbocharger system.

***Claim 114 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Sundles et al. (Patent Number 4,628,877); and further in view of Coester et al. (Pub. Number EP 952329 A).***

The modified Minami device discloses the invention as recited above; however, fails to disclose mounting hardware.

Coester teaches that it is conventional in the turbocharged internal combustion engine art, to utilize mounting hardware for mounting oil pump (9) in the lower region of the engine (See Figure 1, and Abstract).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized mounting hardware, as taught by Coester, to mount the oil pump to the engine.

***Claim 115 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minami et al. (Patent Number 4,422,295), in view of Sundles et al. (Patent Number 4,628,877); and further in view of Fehr et al. (Patent Number 4,953,515).***

The modified Minami device discloses the invention as recited above; however, fails to disclose a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line.

Fehr teaches that it is conventional in the fuel injection system art, to utilize a hose (4) and fittings (Not Numbered) to connect a fuel pressure regulator (3) to an intake tube (11), an intake manifold, or to an exhaust line (See Figures 1-2).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a hose and fittings to connect a fuel pressure regulator to an intake tube, an intake manifold, or to an exhaust line, as taught by Fehr to improve the efficiency of the modified Minami, since the use thereof would have controlled the quantity/amount of fuel injecting into the engine.

***Allowable Subject Matter***

Claims 53, 55-57, 59-64, and 87-89 are allowed.

***Response to Arguments***

Applicant's arguments with respect to claims 38-42, 44-53, 55-57, 59-66, 68-103, 105-115 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Tanaka (US Patent Number 4,203,296) discloses a supercharged internal combustion engine having a supercharger mounted on an exhaust pipe.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB  
March 22, 2006

  
Thai-Ba Trieu  
Primary Examiner  
Art Unit 3748